DOCUMENT RESUME

ED 151 722 CS 003 913

AUTHOR	Adams, Marilyn J.; And Others
TITLE	Beginning Reading: Theory and Practice. Reading Education Report No. 3.
INSTITUTION	Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	Nov 77
CONTRACT	400-76-0116
NOTE	15p.
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	*Beginning Reading; Decoding (Reading); Primary Education; *Reading Comprehension; *Reading Instruction; *Reading Processes; *Reading Research; Research Needs; Semantics; Structural Analysis; Syntax; Vocabulary Development
IDENTIFIERS	*Center for the Study of Reading (Illinois); *Personal Experiences

ABSTRACT

Successful reading is a complex, interactive process in which the reader's experience and information are as important to comprehension as the content of the printed page. This article describes several reading processes, discusses the problems involved for the beginning reader, and indicates some implications for reading instruction. Five processes involved in reading comprehension are considered: decoding, syntactic structure, the differences between spoken and written language, semantics, and textual organization. Stressing the inherent difficulties in teaching each of these processes to beginning readers, the article urges further research on how primary grade readers relate personal experience to the reading process. (MAI)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED151722

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CENTER FOR THE STUDY OF READING

Reading Education Report No. 3

BEGINNING READING: THEORY AND PRACTICE

Marilyn J. Adams
Bolt Beranek and Newman Inc.

Richard C. Anderson and Dolores Durkin
University of Illinois at Urbana-Champaign

November 1977

University of Illinois
at Urbana-Champaign
51 Gerty Drive
Champaign, Illinois 61820

Bolt Beranek and Newman Inc.
50 Moulton Street
Cambridge, Massachusetts 02138

The research reported herein was supported in part by the National Institute of Education under Contract No. US-NIE-C-400-76-0116.

CS003 913

Beginning Reading: Theory and Practice[1]

Anyone who knows the literature on beginning reading is forced to conclude that much still needs to be learned about what it is and how it should be taught. Those who know the literature and are also aware of what goes on in classrooms must face up to another inevitable conclusion; namely, the failure of classroom practices to reflect what is known.

What is known with certainty is meager. Even descriptions of the very nature of the reading process continue to be characterized by diversity rather than agreement. Within the framework of one conception, for example, reading is "bottom-up" processing. According to this interpretation, the reader starts with letters and, as he attends to them, he begins to have expectations for the words they will spell. As he identifies the words, he has further expectations for how they will be strung together and what they will mean when assembled into phrases and sentences.

Contrasting with this "data driven" interpretation is one that sees reading as being "conceptually driven." Within the latter framework, reading is, to use Goodman's (1967) words, "a psycholinguistic guessing game" in the sense that a reader's knowledge of language and of his world suggests certain hypotheses that are tested--that is, accepted or rejected--against what is printed. According to this interpretation, reading is "top-down" processing.

Still another interpretation, one that underlies this article, views reading as an essentially interactive process (Rumelhart, 1976). From such a perspective, top-down and bottom-up processing are seen to occur simultaneously, at least for a skilled reader. This makes successful reading as

[1]This article originally appeared in the January, 1978 issue of Language Arts, and is reprinted with the permission of the National Council of Teachers of English.

dependent upon the information that is in the reader's head as upon the information that is in the text. Comprehension will be obstructed, therefore, whenever a critical skill or a critical piece of knowledge is lacking. When it is, the proficient reader finds a way to compensate. He might pause and sound out a word; or he might rely on top-down processes to solve the problem. In the latter case he might deduce the meaning of the troublesome word from contextual information. Both types of solutions are regularly used by skilled readers and both contribute to their success. When either top-down or bottom-up processing is followed to the extreme, however, problems arise.

The danger of relying too heavily and exclusively on top-down processing is obvious. Balance between the information that the reader brings to the text and that which the text should provide is lost. To the extent that guesses are piled upon prior guesses the individual is not really reading in any useful way.

Relying too exclusively on what is printed may also create problems. Because the human mind is a limited processor, attention directed to decoding means that attention will be taken away from other things--from what previously identified words said, for example. Limited processing capacity is an especially critical problem for new readers since many of the necessary subskills are not yet well learned and demand conscious attention.

The remaining sections of this article will consider a number of problems that beset beginning readers and will point out what they indicate for reading instruction.

Decoding

For everything to work together in a smoothly coordinated way, readers must identify words automatically. Beginners, however, are still working on that requirement. To assist them, phonics is taught. Ideally, it will be taught in a way that concentrates on patterns of letters since it is patterns, not individual letters, that suggest pronunciations. Although instructional materials now highlight patterns, some teachers continue to teach decoding skills as if decisions about a pronunciation can be made letter by letter. The persistence probably reflects the fact that the use of new materials is often affected by old procedures and habits. Such an explanation seems reasonable since materials of the past commonly assigned unmerited importance to individual letters.

Materials of the past also failed to underscore the need for flexible application of what is taught in phonics. More specifically, they failed to portray decoding as a type of problem solving that does not begin with a ready-made answer but, rather, seeks one out with the help both of a word's spelling and of the context in which that word is embedded. Teachers who keep this in mind will steer away from having children decode words presented in lists and, instead, will move toward practice that concentrates on unfamiliar words placed in sentences. Practice (of the right kind) is important because it is only rapid decoding that assists with comprehension.

Although some might take it for granted that children get sufficient and prolonged practice in decoding, classroom observations reveal something else. Once glossaries appear in books--this occurs at about the third or fourth grade level--"Look it up in the glossary" is the directive children commonly receive when they are having trouble with a new or forgotten word.

While nobody would deny the value of their knowing how to use reference materials like glossaries and dictionaries, nobody could deny either that it makes little sense to spend huge amounts of time teaching phonics in the primary grades if what is taught there is put on the shelf in subsequent years.

Anyone teaching phonics also needs to keep in mind a point made earlier; namely, that the human mind is a limited processor. Because it is, a reader's processing capacity can be so taken up with sounding out a word that he may block on previously identified words. The meaning of this for teaching is clear: Have children habitually reread any sentence in which a "worked on" word occurs, once that word has been identified. Only in this way is comprehension of the sentence likely. Simultaneously, the same habit should discourage word-by-word reading, something that hardly promotes comprehension.

Anyone interested in promoting comprehension needs to know about syntax. Consequently that topic is discussed next.

Syntax

Syntax refers to the order of words in a phrase or sentence. Such order is significant because English is a positional language. That is, it relies heavily on word order to convey meaning. Consequently, to change order is to change meaning. Expressions like off day and day off effectively demonstrate this.

The dependence of meaning on word order indicates that even though a child's ability to decode is important for reading, it is not sufficient for success. That decoding might be sufficient is associated with a conception of writing that views it as being no more than ciphered speech. According

to this view, if children can learn to translate printed words into their spoken equivalent, the problem of reading is solved. All that's needed is the application of previously acquired language skills to the deciphered text. Why such a view is an overly simple and misleading conception of reading can be explained in a variety of ways.

First of all, there is good reason to question whether beginning readers have as much competance in oral language as is often claimed. The frequent assertion that children entering school have mastered the exceedingly complex structure of our language is based on the finding that, even though the young child does not produce sentences having the complexity found in adult speech, his own speech does reflect all of the basic syntactic transformations. Concluding that children have mastered syntax because they can use basic grammatical structures is, however, a little like describing someone as a grand master simply because he knows the legal moves of the chess pieces. Not to be overlooked, either, is the evidence which indicates that children continue to make substantial gains in their ability to use and understand syntactic structures until they are at least thirteen years old (Palermo and Malfese, 1972).

But, let's suppose that a child does have the syntactic competence to interpret a given sentence in spoken discourse. Can it automatically be assumed that he will understand it if it were written? Our answer is "Not necessarily" for the following reasons.

Ordinarily, spoken language occurs in a rich context of external events that provides comprehension aids not found on the printed page. Or, to put this differently, the speaker is far more helpful to the listener than is the author to the reader. Furthermore, when speaking fluently, people

tend to restrict pauses and breaths to syntactic boundaries. They neither speak as if every word were followed by a comma nor do they move breathlessly on in an attempt to say everything at once. Instead, they provide a listener with temporal cues that help with comprehension because they indicate meaningful units of words. Apparently the listener depends on these temporal cues for when they are distorted, comprehension suffers (Huggins, 1977).

Contrasted with spoken language, written discourse is stingy in the help it offers a reader with syntax. Replacing the obviously helpful pauses of oral language is punctuation, but it is a poor substitute if only because it comes too late. The reader is pretty much on his own, then, as he attempts to group words into such necessary units as phrases and clauses. And unless he can recover the syntactic structure of a printed sentence, it doesn't matter whether he does or does not have the syntactic competence to understand its oral equivalent.

To the extent that the processes of identifying the syntactic units of a sentence are unique to reading, we might expect them to be a problem for the beginner. It is hardly surprising, therefore, that studies of beginning readers' troubles have identified the failure to sample written material in phrasal units, and the tendency to indulge in many more fixations per line of the text than do mature readers (Levin and Kaplan, 1970; Kolers, 1976).

The failure of beginners to organize sentences into phrases creates memory problems, hence comprehension problems too. This is the case since it is the meaningfulness of a series of words that allows a listener or a reader to remember them. Recalling ran, boy, little, to, school, the, for

example, is far more difficult than remembering the very same words presented in a meaningful order like the little boy ran to school.

The indisputable importance of getting an author's words organized into meaningful units if they are to be both understood and remembered raises questions about some common classroom activities. For example, word-identification practice that is routinely carried on by having children read individual, isolated words (flashcard practice) is hardly likely to foster the type of processing that the comprehension of sentences requires. Raising a question about this type of practice, however, is not to question practice itself. To the contrary, for one of the common problems found among poor readers is the inability to identify words sufficiently quickly. Such a problem is not remedied with less practice but, rather, with different and better practice. Better practice would have children concentrate on connected words (the girl, on the table), not on isolated words (the, girl, on, the, table).

Another common classroom activity called into question by the importance of segmenting a sentence into meaningful parts is the one called "round robin" reading. This is the procedure in which one child reads aloud while others in his group are expected to follow the same material silently. Anyone who has observed the procedure soon learns that, at the beginning level, oral reading is of the halting, word-by-word kind. As such, it hardly provides an ideal model for anyone who is attempting to put an author's words together in a way that will assist with understanding them.

The great emphasis put on oral reading in the primary grades might also foster other problems related to comprehension since it portrays reading as a performing art rather than an effort to understand what an author has

written. The erroneous portrayal is undesirable because it could inhibit young readers from arriving at the understanding that reading is not saying something to another but is, instead, getting something from another.

Further Differences between Spoken and Written Language

Still more differences between spoken and written language need to be kept in mind because they also help to pinpoint the special requirements of success with reading.

One very significant difference has to do with the setting in which children acquire, use, and respond to oral language. Setting, in this case, refers to such nonlanguage "extras" as shared experiences, gestures, facial expressions, and pointing--all of which offer considerable assistance with oral language comprehension. In the face of written language, on the other hand, a reader has no extra-linguistic contexts. Instead, he must construct mental contexts from clues that come from the printed page and from his/her knowledge of the world.

For beginners, constructing the necessary contexts can be difficult. Since writers cannot do such things as point, referring expressions (words like this, that, here, and there) may be incomprehensible and so, too, may the intended referents of certain words. To illustrate this, consider a "simple" sentence like, John said to Peter, "Come over to my house tomorrow." If a child heard this sentence, he or she would understand that my referred to the speaker and that tomorrow referred to the day after the utterance. To read the same sentence, however, my has to be interpreted as meaning John's while tomorrow has to be interpreted as meaning the day after John spoke to Peter. For a child, these necessary changes in perspective may not be easy--at least not as easy as we commonly assume them to be.

Since fiction characteristically requires a reader both to establish and shift perspective, the traditional practice of using stories to teach beginning reading may be a faulty one. Admittedly, authors of the easy readers make generous use of pictures, which should aid children in constructing the mental contexts that comprehension requires. However, pictures can lead to other problems; namely, a reliance on pictures instead of on words, and, secondly, reduced motivation to read a story since the pictures tell it.

Semantics

Still more problems that face the beginner in reading have to do with the need to understand the meanings of words. Such a need is verified not only by the application of common sense but also by test data. Over the years, for example, a persistent research finding has pointed to the close association that exists between scores on vocabulary tests and scores on measures of reading achievement.

Research data on vocabulary itself agree with what is found when classrooms are visited; for, when they are, generous amounts of confusion about meanings are revealed (Durkin, 1976). Children as advanced as fourth graders have been heard to define border (in the context of "South of the Border") as "somebody who lives with you but he's not your family." In earlier grades, bold has been explained as meaning "not having any hair on the top of your head" whereas canyon was described as "a big gun that you use in a war."

Research data uncover vocabulary problems that are more subtle and hidden. One study, for instance, revealed unexpected complications in acquiring correct meanings for words like give, take, buy, and sell (Gentner, 1975). At first, children assign equivalent meanings to give and sell, and to take and buy. Only later are they able to deal with a second

dimension of meaning for sell and buy (the transfer of money), which allows for distinctions between give and sell, and between take and buy. Other studies report well-known findings; for instance, children's tendency to overgeneralize and undergeneralize meanings. Initially, for example, a word like brother includes all male children but no male adults. Only with the accumulation of experiences does the true meaning come through.

Meanings for words that are in a context can create even greater problems; for, now, children must move from a wide range of possible meanings to the one that fits the context. Often, knowing what does fit requires not only a knowledge of that range but also the ability to infer what is only implied in the context. At times, background knowledge is an additional prerequisite for success.

What all this says to teachers is crystal clear: If each child's potential for reading is to be realized, attention to listening-speaking vocabularies must be viewed both as a serious and a never-ending responsibility.

Text Organization

Just as word-by-word reading thwarts comprehension, so too does sentence-by-sentence reading since relationships also exist among sentences. Generally, classroom instruction first deals with sentence relationships through the avenue of sequence. What happened first? What happened next? And then what happened? These are frequent queries when a selection is being discussed. Relationships other than sequence, however, are common in written discourse and cover such things as cause-effect relationships, explanations, elaborations, examples, exceptions, contradictions, and conclusions.

Even though comprehension depends upon success in integrating information across sentences, research on this topic with primary grade children is

practically nonexistent. Nonetheless, based on the best evidence available, it appears that children have a great deal to learn about inter-sentence relationships.

Authors offer help with interrelationships through the way they organize what they write. Highly visible signs of organization, for instance, characterize most expository material. An introduction (often labeled as such) indicates what is to come whereas a summary sketches what has been said. In between, headings and subheadings suggest what is major, what is minor, and what relates to what. Exactly how primary-grade readers use such organizational aids is unknown; for, again, research is lacking. In this case, the excessively generous use of narrative material in the early grades may be one explanation for the omission.

The structure built into written material, of course, is not the only kind that affects what is comprehended and retained. Another important kind is what is built into the reader himself in the form of experiences and information. What is used from this knowledge structure is affected by the material; but what is in the written message is also affected by what is in the reader's head. Thus, as was underscored in the initial part of this article, successful reading emerges as a highly complex, interactive process in which what the reader brings to the page is as important as what is written. That is why comprehension always is a highly personal experience.

References

Durkin, D. Teaching young children to read (2nd ed.). Boston: Allyn and Bacon, Inc., 1976.

Gentner, D. Evidence for the psychological reality of semantic components: The verbs of possession. In D. A. Norman and D. E. Rumelhart and the LNR Research Group (Eds.), Explorations in cognition. San Francisco: Freeman, 1975.

Goodman, K. S. Reading: A psycholinguistic guessing game. Journal of the Reading Specialist, 1967, 4, 123-135.

Huggins, A. W. F. Timing and speech intelligibility. In J. Requin (Ed.), Attention and performance. New York: Academic Press, in press.

Kolers, P. A. Pattern-analyzing disability in poor readers. Developmental Psychology, 1975, 11, 282-290.

Levin, H., & Kaplan, E. L. Grammatical structure and reading. In H. Levin and J. P. Williams (Eds.), Basic studies on reading. New York: Basic Books, 1970.

Palermo, D., & Malfese, D. L. Language acquisition from age five onward. Psychological Bulletin, 1972, 78, 409-427.

Rumelhart, D. E. Toward an interactive model of reading (CHIP Report No. 56). Center for Human Information Processing, University of California, San Diego, Calif., March, 1976.

CENTER FOR THE STUDY OF READING

READING EDUCATION REPORTS

No. 1: Durkin, D. Comprehension Instruction--Where Are You?, October 1977.

No. 2: Asher, S. R. Sex Differences in Reading Achievement, October 1977.

No. 3: Adams, M. J., Anderson, R. C., & Durkin, D. Beginning Reading: Theory and Practice, November 1977.